APPENDICE.

RAPPORT DE L'OFFICIER DE SANTÉ.

1900

1900

RAPPORT DE L'OFFICIER DE SANTÉ.

Lettre du Président du Conseil.

Board of Health, Guernsey,
July 20th, 1901.

Sir,

I have the honour to present the Second Annual Report of the Medical Officer of Health for the year 1900. This Report was approved by the Board of Health at its last meeting, and it was resolved that, with your permission, it should be printed as an Appendix to the Billet d'État, and that ten copies, in addition to the number required for the Billet, should be struck off, in similar manner as was done last year.

I have, &c., &c.,

W. MANSELL MACCULLOCH,
President, Board of Health.

Sir T. Godfrey Carey, Knight,
President of the States.

Lettre de l'Officier de Santé.

Health Office, Hougue-à-la-Perre,
April, 1901.

To the President and Members of the Board of Health for the Island of Guernsey.

Gentlemen,

I have the honour to present to you the Second Annual Report of the Medical Officer of Health for the year ending December 31st, 1900.

The fact that I only arrived here as your Medical Officer of Health towards the end of October, last year, and that the records I found at the Health Office were rather meagre, will I trust in some measure account for whatever shortcomings this report may exhibit.

Appended is an extract from the Surveyor's Report, giving valuable information as to the progress of Drainage operations in the Town. There is also good progress being made in St. Sampson's, which I hope to show next year. I have also appended a diagram drawn up by Mr. A. Collenette, F.S.C., with an explanatory comment, showing the effect of weather on the rise or fall in infectious disease. Mr. Collenette is a member of the Board and I feel sure that the States will greatly value these observations and the comments by a gentleman who has made meteorology the study of his lifetime.

I have, &c., &c.,

E. STANLEY HOARE,
Medical Officer of Health.

REPORT.

STATISTICAL.—AREA.

The area of the island is equal to 16,000 acres or 25 square miles, the circumference is 30 miles and the longest diameter 9½ miles.

POPULATION.

Although this Report was completed after the Census had been taken, the returns were not to hand. The census returns were received just before the Report reached the printer's hands and they will be found at the end (see Appendix C). A comparison of the estimates and actual population will show an (approximate) error of 4% in excess, as regards the various rates dealing with the island as a whole. It was necessary, therefore, to base the rates on the estimated population. According to geometrical increase, the population equals 38,240, and as there is no means of checking this against the number of inhabited houses in Guernsey, this estimate should be accepted with caution. The desirability of a quinquennial Census becomes yearly more apparent, for otherwise it is impossible to calculate the various rates with satisfactory accuracy.

Table I. (Incorp. Soc. of M. O. H., 1900), for Whole District.

YEAR.	Population estimated to middle of each year.	BIRTHS.		DEATHS UNDER ONE YEAR OF AGE.		DEATHS AT ALL AGES.	
		Number.	Rate.*	Number.	Rate per 1,000 registered.	Number.	Rate.*
Column ...	1	2	3	4	5	6	7
1890	35,020	1,031	29·72	164	159·0	784	22·38
1891	35,320	1,064	30·12	113	106·2	681	19·28
1892	35,634	1,101	30·89	185	168·0	679	19·05
1893	35,949	1,143	31·79	185	161·9	692	19·02
1894	36,268	1,093	30·13	135	123·5	632	17·42
1895	36,589	1,126	30·77	175	155·4	712	19·49
1896	36,913	1,228	33·26	129	105·0	547	14·81
1897	37,242	1,157	31·06	193	166·8	708	19·01
1898	37,572	1,161	30·90	194	167·0	705	18·73
1899	37,905	1,121	29·57	151	134·7	666	17·57
Averages for ten years, 1890-1899.		1,122	30·82	162	144·7	700	18·67
1900	38,240	1,011	26·44	145	143·4	624	16·32

* Rates calculated per 1,000 of estimated population.

BIRTHS.

The Birth rate for the island during the year was 26·44 or considerably less than that of last year and 4·38 less than the average for the previous ten years.

A reference to Table I. will show that the birth rate has been steadily declining since 1896 when it reached its highest at 33·26. A decline in the birth rates is reported from most districts, and it is no matter for surprise that a thickly populated agricultural community such as Guernsey should feel the wave of commercial depression which the South African War and other circumstances have caused, and should show it in a marked fall in the birth returns for this year. Of the 1,011 births registered during the year, 32 were illegitimate and of these 13 were assigned to the Town.

MARRIAGES.

As regards marriages, I have not been able to obtain a complete record. I trust the improvements in registration which are in progress will enable me to remedy this omission in future reports. Eighty marriages were registered at the Greffe in 1900, but these do not include those solemnized at the English and Roman Catholic Churches.

writing, [illegible] pulmy TB

DEATHS.

The deaths registered, numbered 624; this is equal to a death rate of 16·32, being the lowest recorded for the previous ten years, with the exception of 1896, when it was as low as 14·81. Seventy-six deaths were returned from Senile Decay, 63 from Phthisis, 50 from Heart Disease, 44 from Convulsions and 41 from Bronchitis. While it is eminently satisfactory to note that the greatest number of deaths were recorded from Old Age, it is a matter for regret that a preventible disease such as Phthisis should figure in the second place. The deaths from Violence numbered 27, of which eight were from drowning; 14 deaths were returned from Influenza, a disease which though particularly fatal at its onset in 1890 appears to have lost much of its virulence, though mild and repeated attacks are constantly observed and doubtless account indirectly for many of the deaths registered from Phthisis and other respiratory diseases.

Of these 624 deaths 302 occurred in the Town, as against 322 in the Country, or about in proportion to the distribution of the population. The greater density of population in the Town and the nature of Urban occupations usually leads to a higher death rate; but in this case the fact that the Town has been drained and that the Country is for a Rural District very thickly populated, will no doubt account for the anomaly. One hundred and forty-five deaths occurred under the age of 1 year, only 89 between the years of 1 and 25, 202 between 25 and 65, and no less than 188 or 30% died at ages exceeding 64 years.

INFANTILE MORTALITY.

The mortality under this heading amounted to 143·4. This though higher than last year's rate, which was 135, is below the average for England and Wales.

"Convulsions" again accounts for a very large proportion of these deaths, viz., 26% of the total as compared with 10% in England.

No doubt the absence of proper death certification is in a great measure responsible for this striking difference, as with more accurate diagnosis "Convulsions" tends to disappear from our death returns. Like "Dropsy" and "Jaundice" the word "Convulsions" signifies a symptom only, and, where the exact nature of the disease has been ascertained, it ought not to be returned under the heading of its most prominent symptom. As the death returns are now made, it is impossible to discover whether or not the information as to the cause of death originally came from a medical practitioner. Doubtless in many cases returned under these headings the information has merely been furnished by a relative or person nursing the deceased.

The following Tables show the deaths registered during the year, classified according to Diseases, Parishes and Ages.

RETURN OF DEATHS REGISTERED DURING THE YEAR 1900.

PARISH	*A*	*B*	*C*	*D*	*E*	*F*	*G*	*H*	*I*	*K*	Tl.
GENERAL DISEASES AND INJURIES.											
Diathetic.											
Chronic Rheumatism	1	-	-	-	-	-	-	-	-	-	1
Diseases of the Blood.											
Anæmia	1	-	-	-	-	1	-	-	-	-	2
Epidemic.											
Diarrhoea	14	2	5	-	1	-	-	-	-	-	22
Diphtheria	4	-	2	4	-	-	-	1	-	1	12
Influenza	9	1	3	-	-	-	-	-	-	1	14
Mumps	1	-	-	-	-	-	-	-	-	-	1
Whooping Cough	2	-	-	-	-	-	-	-	-	-	2
Ill-defined.											
Dropsy	4	1	1	1	-	-	-	-	-	-	7
Hæmorrhage	1	-	-	-	-	-	-	-	1	-	2
Other Ill-defined	3	2	3	1	1	-	-	2	-	2	14
Infancy and Old Age.											
Convulsions	17	4	3	5	2	3	2	4	3	1	44
Debility at Birth	3	5	-	1	1	-	-	1	-	-	11
Marasmus	9	-	1	1	-	4	-	-	2	1	18
Premature Birth	5	3	4	-	-	1	-	-	-	-	13
Senile Decay	35	5	8	13	2	2	2	3	5	1	76
Infective.											
Phthisis	26	10	8	6	2	7	-	1	3	-	63
Tubercular (Undefined)	6	-	-	-	-	-	-	-	-	-	6
Other Tubercular	8	-	1	3	-	-	-	-	-	-	12
Intemperance.											
Alcoholism	2	-	-	1	-	-	-	-	-	-	3
Pregnancy.											
Exhaustion	1	-	-	-	-	-	-	-	-	-	1
Hæmorrhage	-	-	1	-	-	-	-	-	-	-	1
Undefined	-	-	1	1	-	-	-	-	-	-	2

1900

Septic.											
Erysipelas	1	-	-	-	-	-	-	-	-	-	1
Sapræmia	-	-	-	-	-	-	-	-	1	-	1
Septicæmia	6	-	1	2	-	-	-	-	-	-	9
Tumours.											
Malignant	14	1	1	2	1	1	-	1	5	-	26
Non-malignant	1	-	-	-	-	-	-	-	-	-	1
Undefined	4	1	-	1	1	-	-	-	1	-	8
Violence.											
Burns	2	1	-	-	-	-	-	-	-	1	4
Drowning	1	1	1	2	1	-	1	-	1	-	8
Falls	2	1	-	1	-	-	-	-	-	-	4
Poisoning	1	-	-	-	-	-	-	-	-	-	1
Suicide	3	-	-	-	-	-	1	-	-	-	4
Undefined	6	-	-	-	-	-	-	-	-	-	6
DISEASES OF SPECIAL ORGANS.											
Alimentary.											
Intestines	5	2	3	1	-	-	-	1	1	1	14
Liver	6	-	-	-	-	-	-	-	1	-	7
Stomach	1	-	2	-	-	-	-	-	-	-	3
Circulatory.											
Apoplexy	8	2	2	6	1	2	1	2	1	-	25
Heart Disease	25	5	7	4	3	-	-	1	2	3	50
Nervous.											
Cerebro Spinal Sclerosis	1	-	-	-	-	-	-	-	-	-	1
Ill-defined	-	-	-	1	-	-	-	-	-	-	1
Locomoter Ataxy	1	-	-	-	-	-	-	-	-	-	1
Meningitis	4	3	1	1	-	-	-	-	1	-	10
Paralysis	11	-	5	3	-	1	-	2	1	2	25
Respiratory.											
Bronchitis	19	4	11	1	-	1	-	-	4	1	41
Broncho Pneumonia	3	-	-	-	-	-	-	-	-	-	3
Laryngitis	-	1	-	-	-	-	-	-	-	-	1
Pleurisy	-	-	-	-	-	-	-	-	-	1	1
Pneumonia	14	3	2	2	-	-	1	-	2	-	24
Urinary.											
Addison's Disease	1	-	-	-	-	-	-	-	-	-	1
Cystitis	2	-	1	-	-	-	-	-	-	-	3
Diabetes	1	-	-	-	-	-	-	-	-	-	1
Nephritis	6	2	1	-	-	-	-	-	2	-	11
Stricture	1	-	-	-	-	-	-	-	-	-	1
	302	60	79	64	16	23	8	19	37	16	624

NOTE.—Explanation of Parish Letters: *A*—St. Peter-Port; *B*—St. Sampson's; *C*—Vale; *D*—Castel; *E*—St. Saviour's; *F*—St. Pierre-du-Bois; *G*—Torteval; *H*—The Forest; *I*—St. Martin's; *K*—St. Andrew's.

Table II. (Incorp.

Names of Parishes.	ST. PETER-PORT.				ST. SAMPSON'S.				THE VALE.				CASTEL.				ST. SAVIOUR'S.			
YEAR.	Population estimated to middle of each year.	Births registered.	Deaths at all ages.	Deaths under 1 year.	Population estimated to middle of each year.	Births registered.	Deaths at all ages.	Deaths under 1 year.	Population estimated to middle of each year.	Births registered.	Deaths at all ages.	Deaths under 1 year.	Population estimated to middle of each year.	Births registered.	Deaths at all ages.	Deaths under 1 year.	Population estimated to middle of each year.	Births registered.	Deaths at all ages.	Deaths under 1 year.
Column ...	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D
1890...	16974	481	397	81	4458	156	79	19	3893	119	83	29	2404	52	78	6	913	21	22	2
1891.........	17008	459	309	40	4549	154	67	20	3947	162	74	20	2426	69	68	6	916	29	20	2
1892.........	17043	496	327	85	4641	165	80	32	4002	152	89	25	2449	63	59	11	919	26	15	5
1893.........	17079	506	344	92	4735	157	63	16	4058	159	70	23	2473	72	63	16	923	29	14	2
1894.........	17117	477	310	67	4831	183	71	19	4116	145	56	12	2499	71	56	11	927	26	14	3
1895.........	17156	499	350	61	4929	156	93	41	4175	154	81	24	2525	71	44	9	931	31	22	8
1896.........	17196	520	242	55	5029	202	70	19	4235	169	67	20	2553	75	56	4	935	33	23	7
1897.........	17237	481	353	81	5131	179	89	38	4296	172	80	29	2581	69	47	11	939	33	15	2
1898.........	17279	467	335	78	5235	185	78	36	4358	161	78	25	2611	87	75	14	943	24	15	4
1899.........	17322	469	298	47	5341	177	90	30	4421	166	72	28	2641	71	62	11	946	24	19	6
Average of 10 years to 1899.	—	485	326	68	—	171	78	27	—	155	75	23	—	70	60	9	—	27	17	4
1900..	17366	436	302	65	5450	178	62	19	4485	170	82	25	2672	70	64	11	949	30	17	4

Soc. of M. O. H., 1900).

Names of Parishes.	ST. PIERRE-DU-BOIS.				TORTEVAL.				FOREST.				ST. MARTIN'S.				ST. ANDREW'S.			
YEAR.	Population estimated to middle of each year.	Births registered.	Deaths at all ages.	Deaths under 1 year.	Population estimated to middle of each year.	Births registered.	Deaths at all ages.	Deaths under 1 year.	Population estimated to middle of each year.	Births registered.	Deaths at all ages.	Deaths under 1 year.	Population estimated to middle of each year.	Births registered.	Deaths at all ages.	Deaths under 1 year.	Population estimated to middle of each year.	Births registered.	Deaths at all ages.	Deaths under 1 year.
Column ...	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D
1890.........	1214	51	32	9	440	10	10	0	657	24	15	3	2619	78	48	10	1285	39	20	5
1891.........	1332	53	27	7	448	13	14	1	665	19	20	5	2659	62	60	9	1303	44	22	3
1892.........	1350	59	29	12	456	7	9	0	673	15	12	2	2699	80	30	6	1322	38	29	7
1893.........	1369	55	30	11	465	14	10	1	682	21	13	1	2701	87	53	15	1341	43	32	8
1894.........	1389	44	26	7	474	8	7	1	690	21	10	2	2745	79	66	10	1360	39	18	3
1895........	1409	54	29	7	481	9	10	2	698	18	14	0	2791	82	45	12	1380	52	24	11
1896.........	1429	56	20	6	489	14	10	0	706	27	7	6	2839	90	32	8	1400	42	20	4
1897.........	1450	37	27	6	498	15	9	1	714	25	14	8	2889	106	56	16	1421	40	18	1
1898.........	1471	57	29	16	508	13	5	0	722	29	12	3	2941	101	48	13	1442	37	30	5
1899.........	1493	50	32	10	518	6	9	1	731	22	19	6	2995	89	45	6	1463	47	20	6
Average of 10 years to 1899.	—	51	28	9	—	10	9	7	—	22	13	·3	—	85	48	10	—	42	23	5
1900.........	1516	57	25	9	527	19	8	2	740	23	19	4	3050	100	39	6	1485	38	17	2

Table IV. (Incorp. Soc. of M. O. H., 1900).

CAUSES OF, AND AGES AT DEATH OF THE DEATHS REGISTERED DURING YEAR 1900.

CAUSES OF DEATH.	WHOLE ISLAND.						
	All Ages.	Under 1.	1-5.	5-15.	15-25.	25-65.	65 and upw'ds.
General Diseases & Injuries.							
Diathetic.							
Chronic Rheumatism	1	—	—	—	—	—	1
Diseases of the Blood.							
Anaemia	2	—	—	—	—	1	1
Epidemic.							
Diarrhoea	22	20	2	—	—	—	—
Diphtheria	12	—	2	10	—	—	—
Influenza	14	4	1	—	—	4	5
Mumps	1	1	—	—	—	—	—
Whooping Cough	2	1	1	—	—	—	—
Ill-defined.							
Dropsy	7	—	—	—	—	2	5
Hæmorrhage	2	—	—	—	—	2	—
Other ill-defined	14	4	—	—	2	7	1
Infancy and Old Age.							
Convulsions	44	38	5	1	—	—	—
Debility at Birth	11	11	—	—	—	—	—
Marasmus	18	16	2	—	—	—	—
Premature Birth	13	13	—	—	—	—	—
Senile Decay	76	—	—	—	—	5	71
Infective.							
Phthisis	63	4	1	2	12	43	1
Other Tubercular	12	3	5	3	—	1	—
Tubercular Undefined	6	1	1	2	—	1	1
Intemperance.							
Alcoholism	3	—	—	—	—	3	—
Pregnancy.							
Exhaustion	1	—	—	—	—	1	—
Hæmorrhage	1	—	—	—	—	1	—
Undefined	2	—	—	—	—	2	—
Septic.							
Erysipelas	1	—	—	—	—	—	1
Sapræmia	1	—	—	—	—	1	—
Septicæmia	9	1	1	—	—	7	—

Tumours.							
Malignant	26	—	—	—	—	14	12
Non-malignant	1	—	—	—	—	—	1
Undefined	8	1	—	—	—	2	5
Violence.							
Burns	4	—	3	1	—	—	—
Drowning	8	—	—	1	—	7	—
Falls	4	—	—	—	—	3	1
Poisoning	1	—	1	—	—	—	—
Suicide	4	—	—	—	—	4	—
Undefined	6	—	—	1	—	4	1
DISEASES OF SPECIAL ORGANS.							
Alimentary.							
Gastritis	1	—	—	—	—	1	—
Intestines	14	—	—	1	1	10	2
Liver	7	—	—	—	—	4	3
Stomach	2	—	—	—	—	2	—
Circulatory.							
Apoplexy	25	—	—	—	—	11	14
Heart Disease	50	1	—	—	1	23	25
Nervous.							
Cerebro Spinal Sclerosis	1	—	—	—	—	—	1
Ill-defined	1	—	—	—	—	1	—
Locomoter Ataxy	1	—	—	—	—	1	—
Meningitis	10	2	1	3	2	2	—
Paralysis	25	1	1	—	—	6	17
Respiratory.							
Bronchitis	41	19	6	1	1	5	9
Broncho Pneumonia	3	1	2	—	—	—	—
Laryngitis	1	—	—	1	—	—	—
Pleurisy	1	—	—	—	1	—	—
Pneumonia	24	3	4	2	1	10	4
Urinary.							
Addison's Disease	1	—	—	—	—	1	—
Cystitis	3	—	—	—	—	1	2
Diabetes	1	—	—	—	—	1	—
Nephritis	11	—	—	—	—	8	3
Stricture	1	—	—	—	—	—	1
	624	145	39	29	21	202	188

By the aid of Table II. a comparison can be made of the Birth-rates, Death-rates, and Infantile Mortality of the different parishes. Dealing with the four largest parishes, it is interesting to note that the Death-rate is lowest in St. Sampson's, although that parish furnishes the highest Infantile Mortality.

The exact figures are as follows :—

Table F.

AVERAGE OF TEN YEARS, 1890-1899.

	St. Peter-Port	St. Sampson's.	The Vale.	St. Martin's.
Birth Rate	28·28	34·89	37·35	30·90
Death Rate	19·00	15·91	18·07	17·45
Infantile Mortality ...	140·2	157·9	148·4	117·6

DISEASES DUE TO SPECIFIC MICRO-ORGANISMS.

These naturally fall under two headings, viz. :—*(a)* those which are notifiable *(b)* those which are not. The following are notifiable in the Island :—Cholera, Small-pox, Diphtheria, Scarlet Fever, Typhus, Enteric Fever and the Plague, Of the above we have this year, fortunately, only had to deal with Diphtheria, Scarlet Fever and Enteric Fever.

A.—NOTIFIABLE SPECIFIC DISEASES.

Table III.—(Incorp. Soc. of M. O. H. 1900).

CASES OF INFECTIOUS DISEASES NOTIFIED, 1900.

Classified according to Ages.

	At all Ages.	0-1.	1-5.	5-15.	15-25.	25-65.	65 and Upw'ds.
Diphtheria	80	0	18	47	8	6	1
Scarlet Fever ...	102	0	8	63	22	9	0
Enteric............	3	0	0	1	2	0	0
Total	185	0	26	111	32	15	1

Ditto classified according to Parishes.

	St. Peter-Port.	St. Sampson's.	Vale.	Castel.	St. Saviour's.	St. Pierre-du-Bois.	Torteval.	Forest.	St. Martin's.	St. Andrew's.	TOTAL.
Diphtheria	29	9	7	12	—	—	—	8	8	7	80
Scarlet Fever	75	5	2	1	3	4	—	—	4	8	102
Enteric Fever.........	3	—	—	—	—	—	—	—	—	—	3
Total	107	14	9	13	3	4	—	8	12	15	185

The average number of cases notified per week was 3·6 and the average number of cases under isolation per week from notifiable infectious disease was 16.

Altogether 87 cases were admitted into the Town and Castel Isolation Wards and the average number of days that each case remained in hospital was 37 days.

Diphtheria.

Eighty cases of Diphtheria were notified during the year, of which 13 proved fatal. This is equal to a case mortality of 16·25%.

Anti-toxin has been freely and promptly used both as a curative measure and for immunization.

A large number of specimens were examined at the Health Office for the Klebbs Löffler Bacillus, in many cases with positive results, and I consider the sum expended in furnishing the Laboratory (only £110) to have been already indirectly returned.

The month claiming the greatest number of cases (16) was December, a month in itself very wet and following five weeks of continuous rain.

During February only one case was notified.

The death rate from Diphtheria per 1,000 living was ·34 against ·60 for last year; this, though a most satisfactory reduction (no doubt largely due to the use of Anti-toxin) is still high, and I trust the next annual report will show a further reduction in the mortality from this disease.

As regards distribution, 29 of the eighty cases reported were notified from the Town. The returns available show the rural population to be but slightly in excess of the Urban, nevertheless 63·75% of the cases of Diphtheria were notified from the Country, while only 36·25°/o occurred in the Town; it would appear, therefore, that in spite of the greater density of the population of the latter, the risk of contracting this disease is less in the Town than in the Country.

The incidence of the Disease has been essentially sporadic and we have not far to look for the cause, viz., the extensive pollution of the soil by privies, cesspits and possibly manures (artificial and other), together with the moisture which renders the Island so fertile.

Forty-seven of the cases were notified from October to March, against 33 from April to September inclusive.

The cases isolated at the Town Hospital numbered 24, the remainder having sufficient accommodation were allowed to remain at home. Of the deaths from this disease four occurred at the Hospital, and nine at home.

DIPHTHERIA.—Cases Notified and Number of Deaths.

Parish.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Tl.
St. Peter-Port	1	-	4	4	2	-	2	3	2	4	3	4	29
St. Sampson's	-	-	2	-	2	1	-	-	1	-	1	1	9
Vale	1	-	1	-	-	2	-	-	1	1	1	-	7
Castel	2	-	-	1	-	-	-	-	2	1	1	5	12
St. Saviour's	-	-	-	-	-	-	-	-	-	-	-	-	0
St. Pierre-du-Bois	-	-	-	-	-	-	-	-	-	-	-	-	0
Torteval	-	-	-	-	-	-	-	-	-	-	-	-	0
Forest	-	-	-	-	1	3	-	-	-	-	-	4	8
St. Martin's	1	1	1	-	-	1	-	1	-	1	-	2	8
St. Andrew's	-	-	1	-	-	1	1	2	-	1	1	-	7
	6	1	9	5	5	8	3	6	6	8	7	16	80
Deaths—Town	-	-	-	-	1	-	-	1	-	-	-	-	2
Country	-	-	1	1	1	4	-	1	-	1	-	2	11

SCARLET FEVER.

One hundred and two cases of Scarlet Fever were notified during the year and it is gratifying to be able to report that no deaths occurred from this disease. The greatest number of cases (24) were reported in April, and the incidence of the disease appears to have steadily declined towards the end of the year, only 3 being reported in November, and none in December. Of the 102 cases notified 61 were treated in the Castel Isolation Hospital. The greater number of cases reported occurred in the Town.

I am of opinion that insanitary conditions do not affect the spread of Scarlet Fever to any appreciable extent, although there can be no doubt that where such conditions prevail the disease is apt to become more severe.

Fortunately the severity of Scarlet Fever is decreasing yearly and it has even been proposed to discontinue isolating this disease on the grounds that the benefits to be obtained thereby are no longer commensurate with the expenditure incurred. At first sight there would appear to be much to support this view, but I think that careful investigation of the facts will show that we should not be justified in adopting this course, although it is possible that future developments may materially modify the action at present taken by the various Sanitary Boards throughout the Country. That great benefits have already been derived from isolating Scarlet Fever cannot be doubted, and if in the future experience in England should show that it is safe to relax the isolation of this disease, it is obvious that we should still have available, sufficient Isolation accommodation, in readiness for any sudden and (possibly) severe outbreak, that might occur; also one should not lose sight of the fact that although the direct mortality from Scarlet Fever is at present almost nil, mischief frequently results to the kidneys and other organs which often persists through life and thus cripples the individual in the struggle for existence.

The increasing mildness of Scarlet Fever is rendering the diagnosis correspondingly more difficult, and unfortunately we have in the case of this disease no bacteriological examination to fall back upon. This renders the provision of observation wards in our Isolation Hospitals the more necessary, and ample provision for the same will be made in the new States Isolation Hospital to be shortly erected at the Castel.

That of the 102 cases above mentioned one only subsequently contracted Diphtheria is a matter for congratulation and doubtless accounts in a great measure for the absence of mortality from Scarlet Fever during the year, as this complication is a particularly formidable one.

SCARLET FEVER.—CASES NOTIFIED.

Parish.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Tl.
St. Peter-Port	9	11	15	18	2	6	2	3	2	5	2	-	75
St. Sampson's	-	-	-	2	-	-	1	-	1	-	1	-	5
Vale	-	-	-	-	1	1	-	-	-	-	-	-	2
Castel	-	-	-	-	1	-	-	-	-	-	-	-	1
St. Saviour's	-	-	3	-	-	-	-	-	-	-	-	-	3
St. Pierre-du-Bois	-	1	1	1	-	1	-	-	-	-	-	-	4
Torteval	-	-	-	-	-	-	-	-	-	-	-	-	0
Forest	-	-	-	-	-	-	-	-	-	-	-	-	0
St. Martin's	-	1	-	2	1	-	-	-	-	-	-	-	4
St. Andrew's	1	2	1	1	1	2	-	-	-	-	-	-	8
	10	15	20	24	6	10	3	3	3	5	3	0	102

ENTERIC FEVER.

Only 3 cases have been notified this year against 11 last year, two of which occurred among the crew of the *Lord Beresford;* they were promptly isolated in the Town Hospital and when well were sent back to England. The other case also recovered.

Great care was taken to prevent the spread of the disease, more particularly owing to the unprotected state of the Town water supply.

There is considerable risk of Enteric germs entering the wells from neighbouring cess-pits, as it is impossible to be sure that a cess-pit is water-tight. It was discovered in the outbreak that occurred at Lausen, in Switzerland, that these germs had found their way through half-a-mile of earth, quite free from fissures, it being shown by experiment that the passage of finely-ground flour (previously mixed with water) was unable to find its way through.

ENTERIC FEVER.—Cases Notified.

	Jan.	Sept.	Tl.	
St. Peter-Port	1	2	3	— Two of these cases imported.

B.—NON NOTIFIABLE SPECIFIC DISEASES.

Measles and Whooping Cough.

No deaths were returned from Measles during the year, and only two from Whooping Cough.

These two diseases often add considerably to the death rate, but last year Guernsey appears to have escaped any serious outbreak, probably because there were but few susceptible children left from recent epidemics.

Outbreaks of Measles tend to recur about every 3 or 4 years with the fresh appearance of susceptible material, and the same may be said with regard to Whooping Cough, except that the intervals between its re-appearance are usually shorter.

Epidemic Diarrhoea.

Epidemic (or Infantile Diarrhoea) caused 22 deaths of which 20 occurred in children under one year of age. Two causes are commonly given for Infantile Diarrhoea, viz.:—Water pollution and improper feeding. A specific Micro-Organism has been identified, which is believed to be the exciting cause of this disease. A high temperature also appears to be necessary, as in all probability the organism is inactive at low temperatures, but rapidly multiplies and acquires pathogenic properties when a suitable temperature is reached. Of recent years great stress has been laid upon the importance of protecting milk from contamination, especially in hot weather, it having been shown that breast-fed babies suffer less from Epidemic Diarrhoea than those brought up by the bottle.

TABLE SHEWING DEATHS FROM INFANTILE DIARRHOEA FOR THE TEN YEARS 1891-1900.

Year.	Town.	Country.	Total.
1891	1	2	3
1892	9	9	18
1893	30	16	46
1894	5	3	8
1895	17	24	41
1896	4	3	7
1897	7	10	17
1898	16	22	38
1899	17	23	40
1900	14	8	22
Total	120	120	240

The preceding table shows well the yearly variations of the deaths from this disease. It is also interesting to note that the total for the ten years for both Town and Country is the same, apparently indicating that temperature is the main factor influencing the death rate from this most fatal of infantile complaints, although insanitary surroundings must be held responsible for harbouring the disease germ.

TUBERCULAR DISEASES.

Eighty-one deaths were registered from the various forms of this disease during the year, of which no less than 63 were ascribed to Phthisis. Of all infective diseases Phthisis is the one "par excellence," the spread of which would be controlled if the public could be made to fully realise its infective nature; but unfortunately so much ignorance still prevails, and measures for stamping out this disease have been carried out so half-heartedly, that its fatal effects show but little signs of diminution.

I propose with your permission shortly to issue leaflets, which will I trust have some effect in arresting the spread of this so commonly fatal and communicable disease.

The subjoined table shows the deaths registered from Phthisis, Decline and Consumption in your ten parishes during the years 1899 and 1900, with the death rates from this disease and the ratio from Phthisis to the deaths from all causes.

The supposed influence of the St. Sampson's stone crushing machine cannot be traced from this table, and I doubt whether the dust disseminated in the air by them is of so much consequence from a sanitary point of view, as that which blows off the road along the sea front in dry weather.

Table E.

DEATHS REGISTERED FROM PHTHISIS, DECLINE AND CONSUMPTION IN 1899 AND 1900.

	Year.	St. Peter-Port.	St. Sampson's.	The Vale.	Castel.	St. Saviour's.	St. Pierre-du-Bois.	Torteval.	Forest.	St. Martin's.	St. Andrew's.	Total.
No. of deaths registered	1899	18	9	3	6	2	5	0	0	8	0	51
	1900	30	10	8	7	2	7	0	1	4	0	69
Death rate per 1,000 living	1899	1·06	1·97	·75	2·40	2·22	3·75	0	0	3·02	0	1·30
	1900	1·77	2·19	2·00	2·80	2·22	5·26	0	1·50	1·51	0	1·90
Proportion of deaths from Phthisis to total deaths	1899	18:299	9:90	3:72	6:62	2:19	5:32	0:9	0:19	8:45	0:20	—
	1900	30:278	10:62	8:82	7:64	2:17	7:25	0:8	1:19	4:39	0:17	—

It will no doubt be noticed that I have avoided the use of the word "zymotic" in the preceding section. This has been done owing to the fact that the rapid advance in bacteriology has shewn that the *causa causans* of the infectious diseases referred to is not a ferment as originally supposed but a living micro-organism capable of propagation at an enormous rate. It is true that micro-organisms are capable of producing fermentative changes, but they are not to be classed as ferments. I notice that that the Incorporated Society of Medical Officers of Health has also omitted the word "zymotic" in their latest classification of the "causes of death."

SCHOOL INFECTIONS.

No schools were closed during the year on account of Infectious Disease.

The following were the schools which suffered most from Diphtheria and Scarlet Fever.

	Scarlet Fever.	Diphtheria.
St. Joseph's School	10	0
Vauvert School	7	1
St. Andrew's School.........	3	7
Central School	7	0
St. Sampson's School	3	2
Forest School	0	6
St. John's School............	4	3

Of the 10 cases reported at St. Joseph's School, 6 occurred in the month of March, but as these affected only two families, it is probable that home rather than school contact was accountable for the extension in these families. All the other cases were fairly evenly distributed throughout the year, and among the various schools in the Island; this suggests endemic rather than epidemic prevalence more especially is this so with regard to the Diphtheria cases notified.

ISOLATION HOSPITALS.

I must in this connection fully endorse the remarks of your late Medical Officer of Health, Dr. Brownlee, when he says the present arrangement of two Hospitals and a double staff is both inefficient and extravagant. Representations to this effect have on several occasions been made to the States, and I need scarcely remind you that while this report was in compilation the States recently decided to build a new Isolation Hospital at an estimated cost of £8,500 including the purchase of the land. Considerable minor improvements have been made from time to time in the Isolation wards at present in use and although much more remains to be done in this direction, the additions and alterations already made have done much to promote the comfort and well-being of both the patients and staff.

DISINFECTION.

You have on the White Rock a good form of Steam Disinfector by Manlove, Alliott & Co., which has done excellent service during the year.

The articles enumerated below were thoroughly disinfected and promptly returned to the owners, and so carefully was the disinfection performed that no claims for compensation on account of damaged goods were received.

364	Blankets, Sheets and Counterpanes.
159	Mattresses.
165	Bolsters and Pillows.
22	Feather Beds.
1,129	Sundry Articles.

A special van for conveying articles to and from the Disinfector is being constructed by the Guernsey Railway Company, Limited.

There were also disinfected during the year 164 rooms, and that part of the *Lord Beresford* which had been occupied by the two patients suffering from Enteric Fever who were removed to the Town Hospital in September.

INSPECTIONS.

You have not yet officially appointed a Sanitary Inspector, and although the work usually falling to such an officer has been carefully performed under the direction of your Medical Officer of Health by Mr. C. Le Brun, I consider that such an appointment should be made.

In addition to those houses visited owing to Notifiable Infectious Disease having been reported therefrom, 186 houses were inspected (and where necessary re-inspected) at the request of the Constables concerned, either on receipt of complaint from a tenant, or owing to information as to insanitary conditions having indirectly come to the knowledge of the M.O.H.

As regards those cases notified which were allowed to remain at home, many were re-visited in order to ascertain that strict isolation was being observed.

WATER SUPPLY.

The public water supply is obtained from six wells of an average depth of 45 feet. To increase the output it has been found necessary to make horizontal headings of which there are altogether fifteen. The water is supplied unfiltered and without any treatment whatever; there is therefore a great risk of its containing specific micro-organisms capable of distributing Enteric Fever, Diarrhœa, and other Water-borne diseases.

Considering the excellent sand that is to be obtained in the Island I am surprised that filter beds have not been constructed by the Guernsey Waterworks Company.

This supply is used by rather more than one-eighth of the total population, the remainder necessarily depending upon their soft water tanks and on public and private wells.

Read

Complaints are received from time to time that the water of certain wells has become so polluted as to be unfit for drinking, and these wells are sometimes closed by an order from the Constables. As they are seldom replaced by fresh sinkings, considerable hardship is entailed on those who had previously obtained their water from them, as they are in such cases compelled to fetch it from a greater distance.

Extracts from Mr. T. J. Guilbert's Report dated 7th June, 1901, to the Street Board.

PROGRESS OF DRAINAGE WORKS CARRIED OUT BY THE ST. PETER-PORT STREET BOARD UNDER THE LAW OF 1899.

The work was commenced on the 25th January, 1900.

The connection of the east end of Gibauderie and St. Jacques with the west end of Gibauderie and the Rocquettes to the Ivy Gates was made last

Thursday, and the new outfall in Bellegreve Bay is now discharging at 1,005 feet from the road at the Red Lion crossing.

The work completed is as follows, viz. :—

NAME OF ROAD.	Whether new drain or reconstructed.	Length.		Estimated number of houses and population served by drain.		REMARKS.
		New Drain.	Reconstructed.	Houses.	Population.	
Petit Bouët	Both.	1,130	470	61	305	
Vrangue Hill	New.	250	—	14	70	
The Croutes	Do.	770	—	50	250	
St. Stephen's Road	Do.	650	—	11	55	School.
Route Isabelle	Do.	100	—	—	—	
Stanley Road	Do.	100	—	—	—	
Amballes	Both.	470	60	15	75	Two Schools.
Victoria Road	Reconstr'd.	—	2,000	121	605	
The Bouët	New.	2,000	—	73	365	
The Vrangue	Do.	2,250	—	9	45	
Mont Arrivé	Do.	150	—	4	20	
The Couture	Do.	840	—	19	95	
Rozel Road	Do.	925	—	13	65	
St. Jacques (lower)	Do.	1,270	—	31	155	
Gibauderie	Do.	1,490	—	50	250	
St. Jacques (upper)	Do.	384	—	19	95	
Rocquettes Lane	Do.	230	—	4	20	
Rocquettes Road	Do.	560	—	14	70	
St. James' Street	Reconstr'd.	—	722	9	45	Two Churches and Gaol.
Rue des Bordages	New.	925	—	25	125	
Ivy Castle Lane	Do.	360	—	3	15	
Truchot	Reconstr'd.	—	120	—	—	
Vauxlaurens	Do.	—	1,140	12	60	Brewery & Lunatic Asylum.
Cambridge Park Road.	Do.	—	218	12	60	
Candie	Do.	—	434	14	70	
Guielles Road	Do.	—	1,200	19	95	School.
Total		14,854	6,364	602	3,010	

The reconstruction of the drain in Mount Durand has already been sanctioned by the Royal Court and will I hope be undertaken soon.

In many cases the leakage was found to percolate very deeply into the soil.

As the work progressed the houses have been connected as soon as ever the main admitted it, the proprietors with very few exceptions readily complying with the instructions given them to connect and suppress the objectionable arrangements existing.

The mains have been laid as already submitted to the Board, when each section was undertaken, with a fall giving a velocity of from 2½ to somewhat over 6 feet per second, calculated on the estimated quantity of flow in each case, the maximum fall being broken and regulated to within the recognised safe limit of non-destructive velocity. It must, however, be pointed out that the fall of 2 feet per second, recognised sufficient to render sewers self-cleansing, is with the understanding that a sufficient quantity of water is used, which I find is not always the case, especially with the working-class, whose landlords very rarely allow a water supply to the closets.

Appendix C.

CENSUS OF GUERNSEY, 1901.

REGISTRATION DISTRICT.	Separate Families' Schedules.	HOUSES.					PERSONS.		
		Inhabited.	Uninhabited		Building.	Tenements of less than 5 rooms.	Male.	Female	Total.
			In occupation.	Not in occupation.					
St. Peter-Port	4220	2990	223	22	10	2006	8454	9709	18163
St. Sampson's	1247	995	34	15	10	643	2848	2725	5573
The Vale	1174	926	11	27	11	655	2558	2524	5082
St. Andrew's	369	329	8	12	2	108	762	790	1552
St. Martin's	737	646	6	27	9	290	1519	1682	3201
The Castel..	624	571	26	17	2	278	1408	1394	2802
St. Saviour's	270	225	5	1	—	108	520	542	1062
St. Peter-in-the-Wood	348	293	6	10	2	173	776	801	1577
The Forest...............	224	186	2	5	1	102	428	414	842
Torteval..................	113	113	4	2	—	20	218	228	446
Total	9326	7274	325	128	47	4383	19491	20809	40300

WILLIAM BELL, Colonel,
Government Secretary.

THE WEATHER OF 1900,

WITH REFERENCE TO THE INFLUENCE IT HAS EXERTED ON THE PUBLIC HEALTH.

The influence of weather on Health is best made out by a study of averages, both of weather factors and disease.

Owing to well-known causes such a study is not possible in Guernsey, but the work of the Medical Officers of Health makes it possible, this year, to initiate the study.

Weather is but one factor, or more correctly, one group of factors having an influence on Health and Disease, but there is no room to doubt that it is an important group of factors.

This report will confine itself to noticing the connection between weather elements and the cases of disease notified, and will make no attempt to account for contradictions or discrepancies where these depend on factors other than weather.

That temperature influences diseases has been abundantly proved; indeed our observation shows us that some diseases occur in summer and some in winter; it may therefore be taken for granted and it remains for me to show how the diseases of 1900, as notified, have been influenced.

The mean temperature investigations of the last 57 years have proved but a succession of cold and warm periods which, when seen as a curve, appear as a series of waves, and it follows as a matter of course that a warm period is usually preceded and succeeded by (comparatively) cold ones. Some of these warm and cold periods were well marked in 1900. In March, temperature was low, but it took a sudden and somewhat steady rise in April. The result on the deaths from Diarrhoea was well marked, those of April being four times as many as for March. During May, temperature, though variable, was practically without advance, some May days in the third week being actually colder than those of the third week in April Diarrhoea responded and the cases sank to the winter average. The rise of temperature in June was but slight, and Diarrhoea advanced slowly, but in July the two middle weeks gave a sudden rise to the maximum of the year. Here again, Diarrhoea immediately responded, reaching its maximum in August (see curves of temperature for Diarrhoea).

Diarrhoea is more influenced by the temperature of the soil than that of the air, but no soil temperatures are taken in Guernsey. The connection, however, is made visible by a study or comparison of the Diarrhoea and rainfall curves. The quantity of rain influences the temperature of the soil and we must look for the influence of both temperature and rainfall for the effect of weather on Diarrhoea. During the summer months the curves show the influence so strongly that no discussion is needed.

Scarlet Fever usually reaches its maximum in October and November. In Guernsey, in 1901, it reached its maximum in April. The influence of temperature, as shown by the curves, is not traceable, but the rainfall appears to have had more influence. The true factor as shown in the curves is the sunshine, for with the increase of sunshine as shown by the monthly averages, Scarlet Fever (monthly totals) diminishes. This influence will, I believe, be well brought out when a six to ten years' average of Scarlet Fever has been obtained, for my observations of ten day periods lead me to believe that this disease responds fairly well to the variations of sunshine.

Diphtheria roughly responds to rainfall and sunshine, its variations follow those of sunshine fairly closely, falling with the rise of sunshine, and rising with diminishing sunshine. It must be remembered that large rainfall means small sunshine as a matter of course, hence in both Scarlet Fever and Diphtheria it is probable that sunshine is the true factor.

The small number of cases of these diseases makes this enquiry difficult, but it is my intention to, with the aid of the M. O. H., keep a watch on the variations of ten-day periods and thus bring out, in the course of years, the influence of weather elements on local disease.

The year 1900 has not been marked for records in weather, it has agreed fairly well with averages. As might have been expected, the year has not been marked by severe epidemics, but it must be remembered that abnormal years will come and therefore our preparations for them should not be relaxed.

ADOLPHUS COLLENETTE, F.C.S.,
F.R. Met. Soc.